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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,531	09/26/2003	Wayne Castleberry	X-9425	6510
7590 01/07/2008 John S. Hale GIPPLE & HALE 6665-A Old Dominion Drive McLean, VA 22101			EXAMINER NGUYEN, SON T	
			ART UNIT 3643	PAPER NUMBER
			MAIL DATE 01/07/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/670,531

Applicant(s)

CASTLEBERRY, WAYNE

Examiner

Son T. Nguyen

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/10/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23,25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the Appeal Brief filed on 10/10/07, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Peter M. Poon/

Peter M. Poon

Supervisory Patent Examiner TC 3600

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruitt et al. (3373009) in view of Heller et al. (4469502).

For claim 1, Pruitt et al. teach a horticultural growing medium comprising: a flexible diisocyanate foam material without filler material (col. 8, lines 23-27, note that there is no filler listed such as peat, ground scrap foam, etc.) having a cation exchange capacity ranging from about 1.0 to about 1.5 (col. 4, lines 55-68 and table I in col. 5), said horticultural growing medium being capable of supporting plant growth. However, Pruitt et al. do not specifically state diphenylmethane diisocyanate as the preferred diisocyanate foam material.

Heller et al. teach in the same field of endeavor of horticultural growing medium as Pruitt et al., in which Heller et al. employ diphenylmethane diisocyanate material as the preferred foam material (col. 6, lines 42-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select diphenylmethane diisocyanate as taught by Heller et al. as the preferred diisocyanate foam material in Pruitt et al.'s growing medium, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice. In re Leshin, 125 USPQ 416.

For claim 2, Pruitt et al. as modified by Heller et al. (emphasis on Pruitt et al.) further teach wherein said cation exchange capacity is about 1.25 (see Table I in col. 5 and explanation of cation exchange in col. 4, lines 55-68).

For claim 3, in addition to the above, Heller et al. further teach wherein said diphenylmethane diisocyanate foam material is taken from a group consisting of polymeric diphenylmethane diisocyanate, crude diphenylmethane diisocyanate, 4,4'-, 2,4'-, 2,2'-diphenylmethane diisocyanate (col. 6, lines 60-68). Thus, the combination of Pruitt et al. as modified by Heller et al. for the diphenylmethane diisocyanate foam material as stated above, teaches polymeric diphenylmethane diisocyanate, crude diphenylmethane diisocyanate, 4,4'-, 2,4'-, 2,2'-diphenylmethane diisocyanate.

For claim 4, in addition to the above, Heller et al. further teach wherein said diphenylmethane diisocyanate foam material is polymeric diphenylmethane diisocyanate (col. 6, lines 60-68). Thus, the combination of Pruitt et al. as modified by Heller et al. for the diphenylmethane diisocyanate foam material as stated above, teaches polymeric diphenylmethane diisocyanate.

For claim 5, in addition to the above, Heller et al. further teach wherein said diphenylmethane diisocyanate foam material is one or a mixture of 2,2'-, 2,4'- and 4,4'- diphenylmethane diisocyanate (MDI), polymeric MDI, crude MDI, namely, products of crude diaminodiphenyl methane or a mixture of the same (col. 6, lines 60-68). Thus, the combination of Pruitt et al. as modified by Heller et al. for the diphenylmethane diisocyanate foam material as stated above, teaches one or a mixture of 2,2'-, 2,4'- and

4,4'-diphenylmethane diisocyanate (MDI), polymeric MDI, crude MDI, namely, products of crude diaminodiphenyl methane or a mixture of the same.

For claim 6, Pruitt et al. as modified by Heller et al. (emphasis on Pruitt et al.) further teach wherein said foam material has a neutral pH ranging from 6.8 to 7.8 (col. 7, lines 10-22).

For claim 7, Pruitt et al. as modified by Heller et al. (emphasis on Pruitt et al.) further teach wherein said foam material is highly porous (col. 3, lines 33-45) but are silent about the foam material maintains a 60 to 40 air to water ratio. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. be maintained with a 60 to 40 air to water ratio, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 8, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has at least 50% of its pores by foam volume ranging in size between 10 and 200 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. with at least 50% of its pores by foam volume ranging in size between 10 and 200 microns, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until

the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 9, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has about 50% of its pores by foam volume ranging in size from about 40 to about 90 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. with about 50% of its pores by foam volume ranging in size from about 40 to about 90 microns, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 10, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has pores ranging from 20% to about 25% by foam volume which range in size between about 0.2 microns to about 10 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. with pores ranging from 20% to about 25% by foam volume which range in size between about 0.2 microns to about 10 microns, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 11, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has pores ranging from about 25% to about 35% by foam volume which

range in size between about 300 microns to about 800 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. with pores ranging from about 25% to about 35% by foam volume which range in size between about 300 microns to about 800 microns, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 12, Pruitt et al. as modified by Heller et al. (emphasis on Pruitt et al.) further teach wherein said foam material is substantially sterile (col. 11, lines 70-75).

For claim 13, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has pores of about 30% by foam volume which range in size between about 300 microns to about 800 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. with pores of about 30% by foam volume which range in size between about 300 microns to about 800 microns, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 14, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has a total porosity ranging from 85% to 95%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to

have the foam material of Pruitt et al. as modified by Heller et al. with a total porosity ranging from 85% to 95%, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 15, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material has a total porosity of about 90% to 92%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. with a total porosity of about 90% to 92%, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claims 16-20,25-26, the limitations have been explained in the above, thus, please see the above.

For claims 21 & 22, Pruitt et al. as modified by Heller et al. are silent about wherein said foam material is a sheet with seeds secured thereto or a shaped block with an aperture cut therein. Seed mats made out of foam material with seeds secured thereto and seed blocks are notoriously well known in the art, thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the foam material of Pruitt et al. as modified by Heller et al. be made into a sheet with seeds secured thereto or a shaped block with an aperture cut therein, since applying a known technique (having foam be made sheet-like to carry seeds or a

shaped block with an aperture cut therein) to a known device (foam material used in horticulture growth medium as taught in Pruitt et al. as modified by Heller et al.) would have yielded predictable results and resulted in an improved system (improved system which allows a user diversity of having the foam material be sheet-like to carry seeds thereon or a shaped block with an aperture cut therein). KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007).

For claim 23, Pruitt et al. as modified by Heller et al. (emphasis on Pruitt et al.) further teach wherein said cation exchange capacity is about 1.0 (see Table I in col. 5 and explanation in col. 4, lines 55-68).

Response to Arguments

4. Applicant's arguments with respect to claims 1-23,25-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Son T. Nguyen/
Primary Examiner
AU3643